

Kick Off Challenges

Use the Docs to guide you through this set of challenges.

If you are stuck, ask one of the red shirts walking around for help and receive a sweet reward for completing each challenge.

InferNOOO

We do not want any battery fires, always treat your batteries with caution

0. Connect your battery ready for safe charging.
1. Ask for a figure of eight cable from a redshirt when you're ready to show you know how not to burn down the college.



BRAAAAINS

Use the docs to feed your BRAAAAINS

1. Connect the switches and battery to the matching colours on your BrainBox
2. Turn it on by pressing the red power button.
3. Boot the laptop, which will connect with the brain and then take you to a web page. On this page, find where it says Docs
4. Using the docs find out how long it takes to learn Python and then tell a redshirt for a reward.

Trick and Treat

Find the following information in the rules and share it with a redshirt to get a treat.

1. The colour that corresponds to each potato patch.
2. The greatest and the least number of league points for first place.
3. The food product that is used in robot testing.



Pitch the Witch



Use GPIO for input and control a servo

1. Ask one of the redshirts for a potentiometer.
2. Read the state of the potentiometer using the BrainBox
3. use the servo to make the provided witch fly back and forth based on the potentiometers position.
4. Show a red shirt to receive a treat for your trick.

Pumpkin Eye

Use the LEDs and IR reflective sensor provided to bring to life your paper pumpkin

1. Follow the “LED Output” section of “Hello GPIO” form the Docs to add LEDs to your pumpkin
2. Connect the supplied Reflective sensor to another GPIO and attempt to read it like a button
3. Light the pumpkins eyes when the retroreflective tape is near
4. Show to a red shirt to receive a treat for your trick.



Out on a Limb

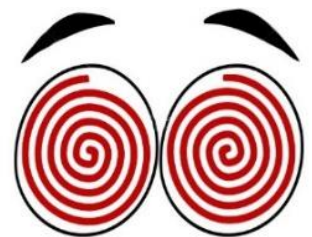
A zombie has left a potato in the cycle rack!

1. Use the examples for the camera (Hello Vision) to read the potato without going outside
2. From the Preview on the laptop, work out who owns this Jacket Potato
3. Report back to a redshirt with the ID and colour of the AprilTag on the limb that your robot shows you.

Hypno Spin

Use your brainbox to hypnotise a redshirt

1. Draw a spiral or use one provided and make it spin using your motors.
2. Hypnotise a redshirt so that they give you sweets.



Graveyard Smash

1. Assemble the minibot using the instructions in the Doc.

2. Using what you have learned so far about controlling motors and reading markers, navigate to a really useful box using the gravestones as waypoints.